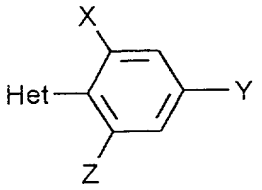
Patent claims

1. Compounds of the formula (I)



(I)

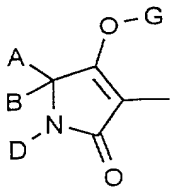
in which

X represents halogen, alkyl, alkenyl, alkinyl, alkoxy, alkenyloxy, alkylthio, alkylsulfinyl, alkylsulfonyl, halogenoalkyl, halogenoalkenyl, halogenoalkoxy, halogenoalkenyloxy, nitro, cyano or in each case optionally substituted phenyl, phenoxy, phenylthio, benzyloxy or benzylthio,

Y represents hydrogen, halogen, alkyl, alkenyl, alkinyl, alkoxy, alkenyloxy, alkylthio, alkylsulfinyl, alkylsulfonyl, halogenoalkyl, halogenoalkenyl, halogenoalkoxy, halogenoalkenyloxy, nitro or cyano,

Z represents hydrogen, halogen, alkyl, alkenyl, alkinyl, halogenoalkyl, halogenoalkenyl, alkoxy, alkenyloxy, halogenoalkoxy, halogenoalkenyloxy, nitro or cyano, where at least one of the substituents X and Y does not represent halogen, alkyl, halogenoalkyl or alkoxy,

Het represents one of the groups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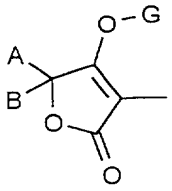
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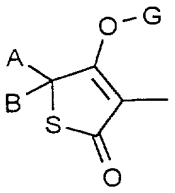
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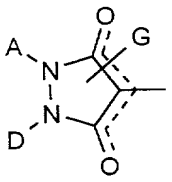
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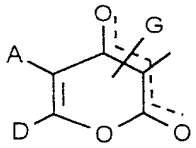
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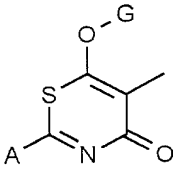

(6)

in which

A represents hydrogen, or represents alkyl, alkenyl, alkoxyalkyl, polyalkoxyalkyl or alkylthioalkyl, each of which is optionally substituted by halogen, or represents saturated or unsaturated, optionally substituted cycloalkyl in which at least one ring atom is optionally replaced by a hetero atom, or represents aryl, arylalkyl or hetaryl, each of which is optionally substituted by halogen, alkyl, halogenoalkyl, alkoxy, halogenoalkoxy, cyano or nitro,

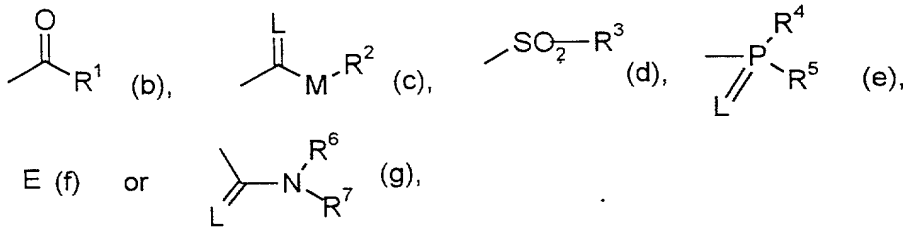
B represents hydrogen, alkyl or alkoxyalkyl, or

A and B together with the carbon atom to which they are bonded represent a saturated or unsaturated, unsubstituted or substituted cycle which optionally contains at least one hetero atom,

D represents hydrogen or optionally substituted radicals from the series consisting of alkyl, alkenyl, alkinyl, alkoxyalkyl, polyalkoxyalkyl, alkylthioalkyl, saturated or unsaturated cycloalkyl which is optionally interrupted by at least one hetero atom, arylalkyl, aryl, hetarylalkyl or hetaryl, or

A and D together with the atoms to which they are bonded represent a saturated or unsaturated, unsubstituted or substituted cycle which optionally contains at least one hetero atom,

G, in the event that Het represents one of the radicals (1), (2), (3), (5) or (6), represents hydrogen (a), or, in the event that Het represents one of the radicals (1), (2), (3), (4), (5) or (6), represents one of the groups



(b), (c), (d), (e),

E (f) or (g),

where

E represents a metal ion equivalent or an ammonium ion,

L represents oxygen or sulphur,

M represents oxygen or sulphur,

R^1 represents alkyl, alkenyl, alkoxyalkyl, alkylthioalkyl or polyalkoxyalkyl, each of which is optionally substituted by halogen, or represents cycloalkyl which can be interrupted by at least one hetero atom and which is optionally substituted by halogen, alkyl or alkoxy, or represents in each case optionally substituted phenyl, phenylalkyl, hetaryl, phenoxyalkyl or hetaryloxyalkyl,

R^2 represents alkyl, alkenyl, alkoxyalkyl or polyalkoxyalkyl, each of which is optionally substituted by halogen, or represents in each case optionally substituted cycloalkyl, phenyl or benzyl,

R^3, R^4 and R^5 independently of one another represent alkyl, alkoxy, alkylamino, dialkylamino, alkylthio, alkenylthio or cycloalkylthio, each of which is optionally substituted by halogen, and represent in each case optionally substituted phenyl, benzyl, phenoxy or phenylthio,

R^6 and R^7 independently of one another represent hydrogen, or represent alkyl, cycloalkyl, alkenyl, alkoxy or alkoxyalkyl, each of which is optionally substituted by halogen, or represent optionally substituted phenyl, or represent optionally substituted benzyl, or together with the N atom to which they are bonded represent a cycle which is optionally interrupted by oxygen or sulphur.

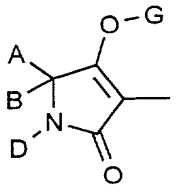
2. Compounds of the formula (I) according to Claim 1 in which

X represents halogen, C_1-C_6-alkyl, C_2-C_6-alkenyl, C_2-C_6-alkinyl, C_1-C_6-alkoxy, C_3-C_6-alkenyloxy, C_1-C_6-alkylthio, C_1-C_6-alkylsulphinyl, C_1-C_6-alkylsulphonyl, C_1-C_6-halogenoalkyl, C_2-C_6-halogenoalkenyl, C_1-C_6-halogenoalkoxy, C_3-C_6-halogenoalkenyloxy, nitro, cyano, or represents phenyl, phenoxy, phenylthio, benzyloxy or benzylthio, each of which is optionally substituted by halogen, C_1-C_6-alkyl, C_1-C_6-alkoxy, C_1-C_4-halogenoalkyl, C_1-C_4-halogenoalkoxy, nitro or cyano,

Y represents hydrogen, halogen, C_1-C_6-alkyl, C_2-C_6-alkenyl, C_2-C_6-alkinyl, C_1-C_6-alkoxy, C_3-C_6-alkenyloxy, C_1-C_6-alkylthio, C_1-C_6-alkylsulphinyl, C_1-C_6-alkylsulphonyl, C_1-C_6-halogenoalkyl, C_2-C_6-halogenoalkenyl, C_1-C_6-halogenoalkoxy, C_3-C_6-halogenoalkenyloxy, nitro or cyano,

Z represents hydrogen, halogen, C_1-C_6-alkyl, C_2-C_6-alkenyl, C_2-C_6-alkinyl, C_1-C_6-halogenoalkyl, C_2-C_6-halogenoalkenyl, C_1-C_6-alkoxy, C_3-C_6-alkenyloxy, C_1-C_6-halogenoalkoxy, C_3-C_6-halogenoalkenyloxy, nitro or cyano, where at least one of the substituents X and Y does not represent halogen, alkyl, halogenoalkyl or alkoxy,

Het represents one of the groups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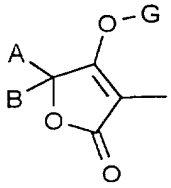
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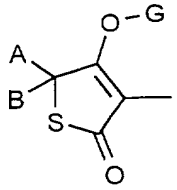
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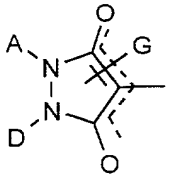
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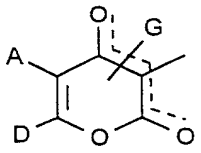
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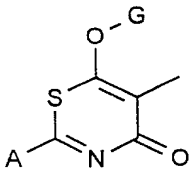

(6),

A represents hydrogen, or represents C_1-C_{12}-alkyl, C_3-C_8-alkenyl, C_1-C_{10}-alkoxy-C_1-C_8-alkyl, poly-C_1-C_8-alkoxy-C_1-C_8-alkyl or C_1-C_{10}-alkylthio-C_1-C_6-alkyl, each of which is optionally substituted by halogen, or represents C_3-C_8-cycloalkyl in which up to two ring members are optionally replaced by oxygen and/or sulphur and which is optionally substituted by halogen, C_1-C_6-alkyl or C_1-C_6-alkoxy, or represents C_6- or C_{10}-aryl, hetaryl having 5 to 6 ring atoms or C_6- or C_{10}-aryl-C_1-C_6-alkyl, each of which is optionally substituted by halogen, C_1-C_6-alkyl, C_1-C_6-halogenoalkyl, C_1-C_6-alkoxy, C_1-C_6-halogenoalkoxy, cyano or nitro,

B represents hydrogen, C_1-C_{12}-alkyl or C_1-C_8-alkoxy-C_1-C_6-alkyl, or

A, B and the carbon atom to which they are bonded represent saturated or unsaturated C_3-C_{10}-cycloalkyl in which one ring member is optionally replaced by oxygen or sulphur and which is optionally monosubstituted or polysubstituted by C_1-C_8-alkyl, C_3-C_{10}-cycloalkyl, C_1-C_8-halogenoalkyl, C_1-C_8-alkoxy, C_1-C_8-alkylthio, halogen or phenyl, or

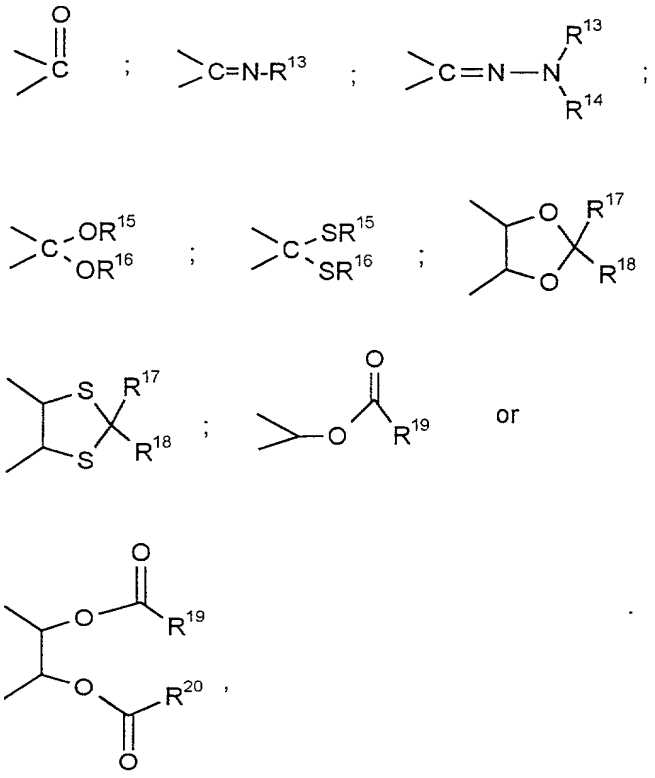
A, B and the carbon atom to which they are bonded represent C_3-C_6-cycloalkyl which is substituted by an alkylenediyl group which

optionally contains one or two oxygen and/or sulphur atoms or by an alkylenedioxy or by an alkylenedithio group, this group together with the carbon atom to which it is bonded forming a further five- to eight-membered ring, or

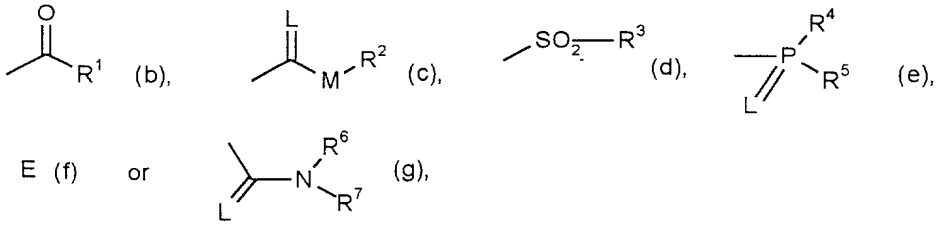
A, B and the carbon atom to which they are bonded represent C_3-C_8-cycloalkyl or C_5-C_8-cycloalkenyl in which two substituents together with the carbon atoms to which they are bonded represent C_3-C_6-alkanediyl, C_3-C_6-alkenediyl or C_4-C_6-alkanedienediyl, in which one methylene group is optionally replaced by oxygen or sulphur and each of which is optionally substituted by C_1-C_6-alkyl, C_1-C_6-alkoxy or halogen,

D represents hydrogen, or represents C_1-C_{12}-alkyl, C_3-C_8-alkenyl, C_3-C_8-alkinyl, C_1-C_{10}-alkoxy-C_2-C_8-alkyl, poly-C_1-C_8-alkoxy-C_2-C_8-alkyl or C_1-C_{10}-alkylthio-C_2-C_8-alkyl, each of which is optionally substituted by halogen, or represents C_3-C_8-cycloalkyl in which up to two ring members are optionally replaced by oxygen and/or sulphur and which is optionally substituted by halogen, C_1-C_4-alkyl, C_1-C_4-alkoxy or C_1-C_4-halogenoalkyl, or represents phenyl, hetaryl having 5 or 6 ring atoms, phenyl-C_1-C_6-alkyl or hetaryl-C_1-C_6-alkyl having 5 or 6 ring atoms, each of which is optionally substituted by halogen, C_1-C_6-alkyl, C_1-C_6-halogenoalkyl, C_1-C_6-alkoxy, C_1-C_6-halogenoalkoxy, cyano or nitro, or

A and D together represent in each case optionally substituted C_3-C_6-alkanediyl or C_3-C_6-alkenediyl,
suitable substituents in each case being:
halogen, hydroxyl, mercapto, or C_1-C_{10}-alkyl, C_1-C_6-alkoxy, C_1-C_6-alkylthio, C_3-C_7-cycloalkyl, phenyl or benzyloxy, each of which is optionally substituted by halogen; or a further C_3-C_6-alkanediyl group, C_3-C_6-alkenediyl group or a butadienyl group which is optionally substituted by C_1-C_6-alkyl or in which two adjacent substituents together with the carbon atoms to which they are bonded optionally form a further saturated or unsaturated cycle having 5 to 6 ring atoms which can contain oxygen or sulphur, or which optionally contains one of the following groups



G, in the event that Het represents one of the radicals (1), (2), (3), (5) or (6), represents hydrogen (a), or, in the event that Het represents one of the radicals (1), (2), (3), (4), (5) or (6), one of the groups



in which

E represents a metal ion equivalent or an ammonium ion,

L represents oxygen or sulphur and

M represents oxygen or sulphur,

R^1 represents C_1-C_{20}-alkyl, C_2-C_{20}-alkenyl, C_1-C_8-alkoxy-C_1-C_8-alkyl, C_1-C_8-alkylthio-C_1-C_8-alkyl or poly-C_1-C_8-alkoxy-C_1-C_8-alkyl, each of which is optionally substituted by halogen, or represents C_3-C_8-cycloalkyl in which at least one ring member is optionally replaced by oxygen and/or sulphur and which is optionally substituted by halogen, C_1-C_6-alkyl or C_1-C_6-alkoxy,

or phenyl which is optionally substituted by halogen, cyano, nitro, C_1-C_6-alkyl, C_1-C_6-alkoxy, C_1-C_6-halogenoalkyl, C_1-C_6-halogenoalkoxy, C_1-C_6-alkylthio or C_1-C_6-alkylsulphonyl,

or phenyl-C_1-C_6-alkyl which is optionally substituted by halogen, nitro, cyano, C_1-C_6-alkyl, C_1-C_6-alkoxy, C_1-C_6-halogenoalkyl or C_1-C_6-halogenoalkoxy,

or 5- or 6-membered hetaryl which is optionally substituted by halogen or C_1-C_6-alkyl,

or phenoxy-C_1-C_6-alkyl which is optionally substituted by halogen or C_1-C_6-alkyl, or

5- or 6-membered hetaryloxy-C_1-C_6-alkyl which is optionally substituted by halogen, amino or C_1-C_6-alkyl,

R^2 represents C_1-C_{20}-alkyl, C_2-C_{20}-alkenyl, C_1-C_8-alkoxy-C_2-C_8-alkyl or poly-C_1-C_8-alkoxy-C_2-C_8-alkyl, each of which is optionally substituted by halogen,

or C_3-C_8-cycloalkyl which is optionally substituted by halogen, C_1-C_6-alkyl or C_1-C_6-alkoxy, or

phenyl or benzyl, each of which is optionally substituted by halogen, cyano, nitro, C_1-C_6-alkyl, C_1-C_6-alkoxy, C_1-C_6-halogenoalkyl or C_1-C_6-halogenoalkoxy,

R^3 represents C_1-C_8-alkyl which is optionally substituted by halogen, or phenyl or benzyl, each of which is optionally substituted by halogen, C_1-C_6-alkyl, C_1-C_6-alkoxy, C_1-C_4-halogenoalkyl, C_1-C_4-halogenoalkoxy, cyano or nitro,

R^4 and R^5 independently of one another represent C_1-C_8-alkyl, C_1-C_8-alkoxy, C_1-C_8-alkylamino, di-(C_1-C_8-alkyl)amino, C_1-C_8-alkylthio, C_2-C_8-alkenylthio or C_3-C_7-cycloalkylthio, each of which is optionally substituted by halogen, or phenyl, phenoxy or phenylthio, each of which is optionally substituted by halogen, nitro, cyano, C_1-C_4-alkoxy, C_1-C_4-halogenoalkoxy, C_1-C_4-alkylthio, C_1-C_4-halogenoalkylthio, C_1-C_4-alkyl or C_1-C_4-halogenoalkyl,

R^6 and R^7 independently of one another represent hydrogen, or C_1-C_8-alkyl, C_3-C_8-cycloalkyl, C_1-C_8-alkoxy, C_3-C_8-alkenyl or C_1-C_8-alkoxy-C_1-C_8-alkyl, each of which is optionally substituted by halogen, or phenyl which is optionally substituted by halogen, C_1-C_8-halogenoalkyl, C_1-C_8-alkyl or C_1-C_8-alkoxy, or benzyl which is optionally substituted by halogen, C_1-C_8-alkyl, C_1-C_8-halogenoalkyl or C_1-C_8-alkoxy, or together represent a C_3-C_6-alkylene radical in which one carbon atom is optionally replaced by oxygen or sulphur,

R^{13} represents hydrogen, C_1-C_8-alkyl or C_1-C_8-alkoxy, each of which is optionally substituted by halogen, C_3-C_8-cycloalkyl in which one methylene group is optionally replaced by oxygen or sulphur and which is optionally substituted by halogen, C_1-C_4-alkyl or C_1-C_4-alkoxy, or phenyl, phenyl-C_1-C_4-alkyl or phenyl-C_1-C_4-alkoxy, each of which is optionally substituted by halogen, C_1-C_6-alkyl, C_1-C_6-alkoxy, C_1-C_4-halogenoalkyl, C_1-C_4-halogenoalkoxy, nitro or cyano,

R^{14} represents hydrogen or C_1-C_8-alkyl, or

R^{13} and R^{14} together represent C_4-C_6-alkanediyl,

R^{15} and R^{16} are identical or different and represent C_1-C_6-alkyl, or

R^{15} and R^{16} together represent a C_2-C_4-alkanediyl radical which is optionally substituted by C_1-C_6-alkyl, C_1-C_6-halogenoalkyl or by phenyl which is optionally substituted by halogen, C_1-C_6-alkyl, C_1-C_4-halogenoalkyl, C_1-C_6-alkoxy, C_1-C_4-halogenoalkoxy, nitro or cyano,

R^{17} and R^{18} independently of one another represent hydrogen, C_1-C_8-alkyl which is optionally substituted by halogen, or phenyl which is optionally substituted by halogen, C_1-C_6-alkyl, C_1-C_6-alkoxy, C_1-C_4-halogenoalkyl, C_1-C_4-halogenoalkoxy, nitro or cyano, or

R^{17} and R^{18} together with the carbon atom to which they are bonded represent a carbonyl group or C_5-C_7-cycloalkyl in which one methylene group is optionally replaced by oxygen or sulphur and which is optionally substituted by halogen, C_1-C_4-alkyl or C_1-C_4-alkoxy and

R^{19} and R^{20} independently of one another represent C_1-C_{10}-alkyl, C_2-C_{10}-alkenyl, C_1-C_{10}-alkoxy, C_1-C_{10}-alkylamino, C_3-C_{10}-alkenylamino, di-(C_1-C_{10}-alkyl)amino or di-(C_3-C_{10}-alkenyl)amino.

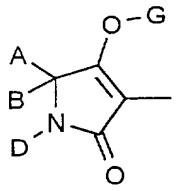
3. Compounds of the formula (I) according to Claim 1 in which

X represents fluorine, chlorine, bromine, C_1-C_4-alkyl, C_2-C_4-alkenyl, C_2-C_4-alkinyl, C_1-C_4-alkoxy, C_3-C_4-alkenyloxy, C_1-C_4-alkylthio, C_1-C_4-alkylsulphinyl, C_1-C_4-alkylsulphonyl, C_1-C_4-halogenoalkyl, C_3-C_4-halogenoalkenyl, C_1-C_4-halogenoalkoxy, C_3-C_4-halogenoalkenyloxy, nitro or cyano, or phenyl, phenoxy, phenylthio, benzyloxy or benzylthio, each of which is optionally substituted by fluorine, chlorine, bromine, C_1-C_4-alkyl, C_1-C_4-alkoxy, C_1-C_2-halogenoalkyl, C_1-C_2-halogenoalkoxy, nitro or cyano,

Y represents hydrogen, fluorine, chlorine, bromine, C_1-C_4-alkyl, C_2-C_4-alkenyl, C_2-C_4-alkinyl, C_1-C_4-alkoxy, C_3-C_4-alkenyloxy, C_1-C_4-alkylthio, C_1-C_4-alkylsulphinyl, C_1-C_4-alkylsulphonyl, C_1-C_4-halogenoalkyl, C_3-C_4-halogenoalkenyl, C_1-C_4-halogenoalkoxy, C_3-C_4-halogenoalkenyloxy, nitro or cyano,

Z represents hydrogen, fluorine, chlorine, bromine, C_1-C_4-alkyl, C_2-C_4-alkenyl, C_2-C_4-alkinyl, C_1-C_4-halogenoalkyl, C_3-C_4-halogenoalkenyl, C_1-C_4-alkoxy, C_3-C_4-alkenyloxy, C_1-C_4-halogenoalkoxy, C_3-C_4-halogenoalkenyloxy, nitro or cyano, where at least one of the substituents X and Y does not represent halogen, alkyl, halogenoalkyl or alkoxy,

Het represents one of the groups



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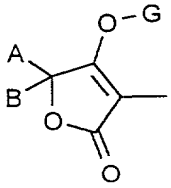

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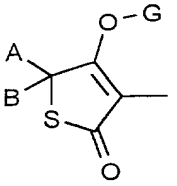

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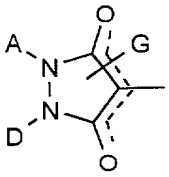

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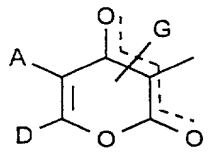

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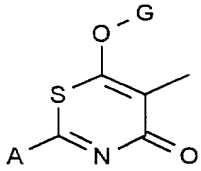


(6),

A represents hydrogen, or C_1-C_{10}-alkyl, C_3-C_6-alkenyl, C_1-C_8-alkoxy-C_1-C_6-alkyl, poly-C_1-C_6-alkoxy-C_1-C_6-alkyl or C_1-C_8-alkylthio-C_1-C_6-alkyl, each of which is optionally substituted by fluorine or chlorine, or C_3-C_7-cycloalkyl in which up to two ring members are optionally replaced by oxygen and/or sulphur and which is optionally substituted by fluorine, chlorine, C_1-C_4-alkyl or C_1-C_4-alkoxy, or phenyl, furanyl, pyridyl, imidazolyl, triazolyl, pyrazolyl, thiazolyl, thienyl or phenyl-C_1-C_4-alkyl, each of which is optionally substituted by fluorine, chlorine, bromine, C_1-C_4-alkyl, C_1-C_4-halogenoalkyl, C_1-C_4-alkoxy, C_1-C_4-halogenoalkoxy, cyano or nitro,

B represents hydrogen, C_1-C_{10}-alkyl or C_1-C_6-alkoxy-C_1-C_4-alkyl, or

A, B and the carbon atom to which they are bonded represent saturated or unsaturated C_3-C_8-cycloalkyl in which one ring member is optionally replaced by oxygen or sulphur and which is optionally substituted by C_1-C_6-alkyl, C_3-C_8-cycloalkyl, C_1-C_3-halogenoalkyl, C_1-C_6-alkoxy, C_1-C_6-alkylthio, fluorine, chlorine or phenyl, or

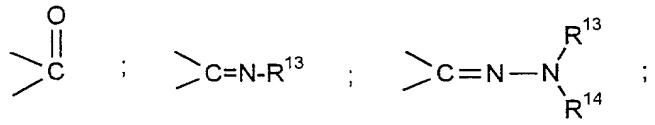
A, B and the carbon atom to which they are bonded represent C_5-C_6-cycloalkyl which is substituted by an alkylenediyl group which optionally contains one or two oxygen or sulphur atoms or by an alkylenedioxy or by an alkylenedithio group, this group together with the carbon atom to which it is bonded forming a further five- to seven-membered ring, or

A, B and the carbon atom to which they are bonded represent C_3-C_6-cycloalkyl or C_5-C_6-cycloalkenyl, in which two substituents together with the carbon atoms to which they are bonded represent C_3-C_5-alkanediyl, C_3-C_5-alkenediyl or butadienediyl, in which one methylene group is optionally replaced by oxygen or sulphur and each of which is optionally substituted by C_1-C_5-alkyl, C_1-C_5-alkoxy, fluorine, chlorine or bromine,

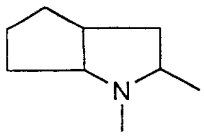
D represents hydrogen, or C_1-C_{10}-alkyl, C_3-C_6-alkenyl, C_3-C_6-alkinyl, C_1-C_8-alkoxy-C_2-C_6-alkyl, poly-C_1-C_6-alkoxy-C_2-C_6-alkyl or C_1-C_8-alkylthio-C_2-C_6-alkyl, each of which is optionally substituted by fluorine or chlorine, or C_3-C_7-cycloalkyl which is optionally substituted by fluorine, chlorine, C_1-C_4-alkyl, C_1-C_4-alkoxy or C_1-C_2-halogenoalkyl and in which one or two methylene groups which are not directly adjacent are optionally replaced by oxygen and/or sulphur, or phenyl, furanyl, imidazolyl, pyridyl, thiazolyl, pyrazolyl, pyrimidyl, pyrrolyl, thienyl, triazolyl or phenyl-C_1-C_4-alkyl, each of which is optionally substituted by fluorine, chlorine, bromine, C_1-C_4-alkyl, C_1-C_4-halogenoalkyl, C_1-C_4-alkoxy, C_1-C_4-halogenoalkoxy, cyano or nitro, or

A and D together represent in each case optionally substituted C_3-C_5-alkanediyl or C_3-C_5-alkenediyl, suitable substituents in each case being:

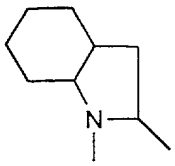
fluorine, chlorine, hydroxyl, mercapto, or C_1-C_6-alkyl, C_1-C_4-alkoxy, C_1-C_4-alkylthio, C_3-C_6-cycloalkyl, phenyl or benzyloxy each of which is optionally substituted by fluorine or chlorine,
or which optionally contains one of the following groups:



or A and D (in the case of the compounds of the formula (I-1)) together with the atoms to which they are bonded represent one of the groups AD-1 to AD-27



AD-1



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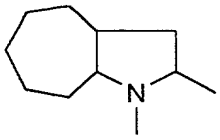

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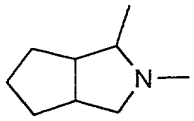

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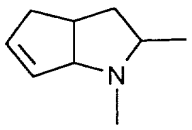

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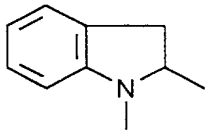

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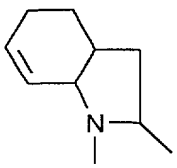

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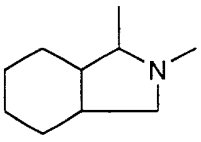

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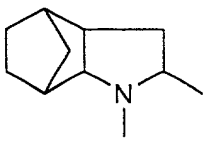

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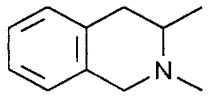

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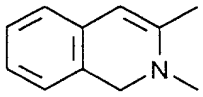

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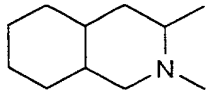

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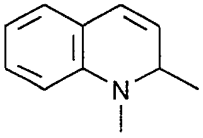

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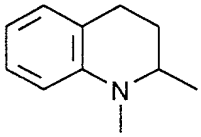

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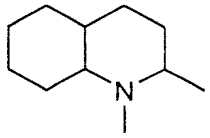

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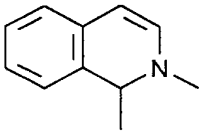

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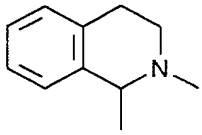

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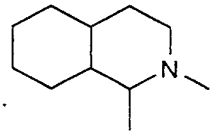

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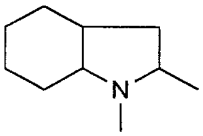

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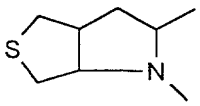

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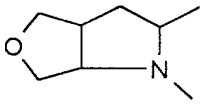

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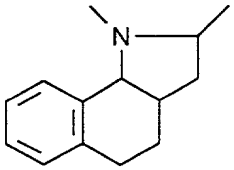

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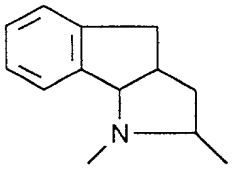

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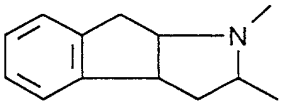

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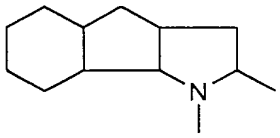

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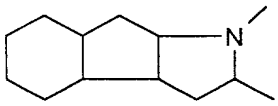

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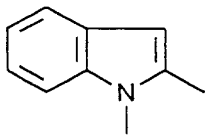
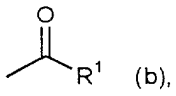
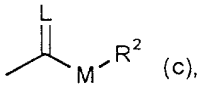
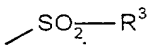


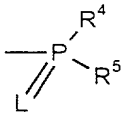
AD-27

G, in the event that Het represents one of the radicals (1), (2), (3), (5) or (6), represents hydrogen (a), or, in the event that Het represents one of the radicals (1), (2), (3), (4), (5) or (6), represents one of the groups

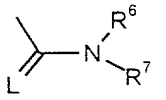
 (b),

 (c),

 (d),

 (e),

E (f) or

 (g),

in which

E represents a metal ion equivalent or an ammonium ion,

L represents oxygen or sulphur and

M represents oxygen or sulphur,

R^1 represents C_1-C_{16}-alkyl, C_2-C_{16}-alkenyl, C_1-C_6-alkoxy-C_1-C_6-alkyl, C_1-C_6-alkylthio-C_1-C_6-alkyl or poly-C_1-C_6-alkoxy-C_1-C_6-alkyl, each of which is optionally substituted by fluorine or chlorine, or represents C_3-C_7-cycloalkyl which is optionally substituted by fluorine, chlorine,

C_1-C_5-alkyl or C_1-C_5-alkoxy and in which up to two ring members are optionally replaced by oxygen and/or sulphur,

or represents phenyl which is optionally substituted by fluorine, chlorine, bromine, cyano, nitro, C_1-C_4-alkyl, C_1-C_4-alkoxy, C_1-C_3-halogenoalkyl, C_1-C_3-halogenoalkoxy, C_1-C_4-alkylthio or C_1-C_4-alkylsulphonyl,

or phenyl-C_1-C_4-alkyl which is optionally substituted by fluorine, chlorine, bromine, C_1-C_4-alkyl, C_1-C_4-alkoxy, C_1-C_3-halogenoalkyl or C_1-C_3-halogenoalkoxy,

or pyrazolyl, thiazolyl, pyridyl, pyrimidyl, furanyl or thienyl, each of which is optionally substituted by fluorine, chlorine, bromine or C_1-C_4-alkyl,

or phenoxy-C_1-C_5-alkyl which is optionally substituted by fluorine, chlorine, bromine or C_1-C_4-alkyl, or

pyridyloxy-C_1-C_5-alkyl, pyrimidyloxy-C_1-C_5-alkyl or thiazolyloxy-C_1-C_5-alkyl, each of which is optionally substituted by fluorine, chlorine, bromine, amino or C_1-C_4-alkyl,

R^2 represents C_1-C_{16}-alkyl, C_2-C_{16}-alkenyl, C_1-C_6-alkoxy-C_2-C_6-alkyl or poly-C_1-C_6-alkoxy, each of which is optionally substituted by fluorine or chlorine,

or C_3-C_7-cycloalkyl which is optionally substituted by fluorine, chlorine, C_1-C_4-alkyl or C_1-C_4-alkoxy, or

phenyl or benzyl, each of which is optionally substituted by fluorine, chlorine, bromine, cyano, nitro, C_1-C_4-alkyl, C_1-C_3-alkoxy, C_1-C_3-halogenoalkyl or C_1-C_3-halogenoalkoxy,

R^3 represents C_1-C_6-alkyl which is optionally substituted by fluorine or chlorine, or phenyl or benzyl, each of which is optionally substituted by

fluorine, chlorine, bromine, C_1-C_5-alkyl, C_1-C_5-alkoxy, C_1-C_3-halogenoalkyl, C_1-C_3-halogenoalkoxy, cyano or nitro,

R^4 and R^5 independently of one another represent C_1-C_6-alkyl, C_1-C_6-alkoxy, C_1-C_6-alkylamino, di-(C_1-C_6-alkyl)amino, C_1-C_6-alkylthio, C_3-C_4-alkenylthio or C_3-C_6-cycloalkylthio, each of which is optionally substituted by fluorine or chlorine, or phenyl, phenoxy or phenylthio, each of which is optionally substituted by fluorine, chlorine, bromine, nitro, cyano, C_1-C_3-alkoxy, C_1-C_3-halogenoalkoxy, C_1-C_3-alkylthio, C_1-C_3-halogenoalkylthio, C_1-C_3-alkyl or C_1-C_3-halogenoalkyl,

R^6 and R^7 independently of one another represent hydrogen, or C_1-C_6-alkyl, C_3-C_6-cycloalkyl, C_1-C_6-alkoxy, C_3-C_6-alkenyl or C_1-C_6-alkoxy-C_1-C_6-alkyl, each of which is optionally substituted by halogen, or phenyl which is optionally substituted by halogen, C_1-C_5-halogenoalkyl, C_1-C_5-alkyl or C_1-C_5-alkoxy, or benzyl which is optionally substituted by halogen, C_1-C_5-alkyl, C_1-C_5-halogenoalkyl or C_1-C_5-alkoxy, or together represent a C_3-C_6-alkylene radical in which one carbon atom is optionally replaced by oxygen or sulphur,

R^{13} represents hydrogen, or C_1-C_6-alkyl or C_1-C_6-alkoxy, each of which is optionally substituted by fluorine or chlorine, or C_3-C_7-cycloalkyl in which one methylene group is optionally replaced by oxygen or sulphur and which is optionally substituted by fluorine, C_1-C_2-alkyl or C_1-C_2-alkoxy, or phenyl, phenyl-C_1-C_3-alkyl or phenyl-C_1-C_2-alkyloxy, each of which is optionally substituted by fluorine, chlorine, bromine, C_1-C_5-alkyl, C_1-C_5-alkoxy, C_1-C_2-halogenoalkyl, C_1-C_2-halogenoalkoxy, nitro or cyano,

R^{14} represents hydrogen or C_1-C_6-alkyl, or

R^{13} and R^{14} together represent C_4-C_6-alkanediyl,

R^{15} and R^{16} are identical or different and represent C_1-C_4-alkyl, or

R^{15} and R^{16} together represent a C_2-C_3-alkanediyl radical which is optionally substituted by C_1-C_4-alkyl, C_1-C_4-haloalkyl or by phenyl which is optionally substituted by fluorine, chlorine, bromine, C_1-C_4-alkyl, C_1-C_2-halogenoalkyl, C_1-C_4-alkoxy, C_1-C_2-halogenoalkoxy, nitro or cyano.

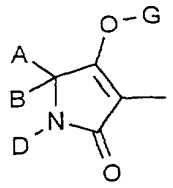
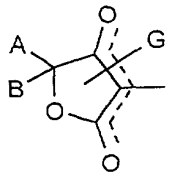
4. Compounds of the formula (I) according to Claim 1 in which

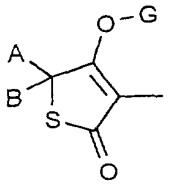
X represents fluorine, chlorine, bromine, methyl, ethyl, propyl, iso-propyl, vinyl, ethinyl, methoxy, ethoxy, propoxy, iso-propoxy, allyloxy, methallyloxy, trifluoromethyl, difluoromethoxy, trifluoromethoxy, methylthio, methylsulphinyl, methylsulphonyl, nitro, cyano, or phenyl, phenoxy, phenylthio, benzyloxy or benzylthio, each of which is optionally substituted by fluorine, chlorine, bromine, methyl, ethyl, propyl, iso-propyl, tert-butyl, methoxy, ethoxy, propoxy, tert-butoxy, trifluoromethyl, trifluoromethoxy, nitro or cyano,

Y represents hydrogen, fluorine, chlorine, bromine, methyl, ethyl, n-propyl, i-propyl, n-butyl, i-butyl, tert-butyl, vinyl, ethinyl, methoxy, ethoxy, propoxy, iso-propoxy, allyloxy, methallyloxy, trifluoromethyl, methylthio, methylsulphinyl, methylsulphonyl, difluoromethoxy, trifluoromethoxy, nitro or cyano,

Z represents hydrogen, fluorine, chlorine, bromine, methyl, ethyl, n-propyl, i-propyl, n-butyl, i-butyl, tert-butyl, vinyl, ethinyl, methoxy, ethoxy, propoxy, iso-propoxy, allyloxy, methallyloxy, difluoromethoxy, trifluoromethyl, trifluoromethoxy, nitro or cyano, where at least one of the substituents X and Y does not represent halogen, alkyl, halogenoalkyl or alkoxy,

Het represents one of the groups


(1),

(2),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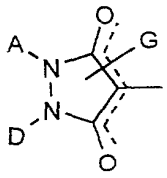
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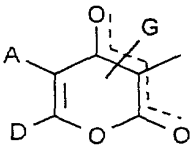
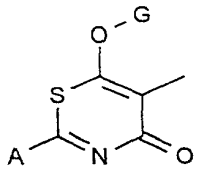

(5),

(6),

A represents hydrogen, or C_1-C_8-alkyl, C_3-C_4-alkenyl, C_1-C_6-alkoxy-C_1-C_4-alkyl, poly-C_1-C_4-alkoxy-C_1-C_4-alkyl or C_1-C_6-alkylthio-C_1-C_4-alkyl, each of which is optionally substituted by fluorine or chlorine, or C_3-C_6-cycloalkyl which is optionally substituted by fluorine, chlorine, methyl, ethyl or methoxy and in which up to two ring members are optionally replaced by oxygen and/or sulphur, or phenyl or benzyl, each of which is optionally substituted by fluorine, chlorine, bromine, methyl, ethyl, n-propyl, iso-propyl, methoxy, ethoxy, trifluoromethyl, trifluoromethoxy, cyano or nitro,

B represents hydrogen, C_1-C_8-alkyl or C_1-C_4-alkoxy-C_1-C_2-alkyl, or

A, B and the carbon atom to which they are bonded represent saturated or unsaturated C_3-C_8-cycloalkyl in which one ring member is optionally replaced by oxygen or sulphur and which is optionally substituted by methyl, ethyl, propyl, isopropyl, butyl, iso-butyl, sec-butyl, tert-butyl, cyclopropyl, cyclohexyl, trifluoromethyl, methoxy, ethoxy, propoxy, iso-propoxy, butoxy, iso-butoxy, sec-butoxy, tert-butoxy, methylthio, ethylthio, fluorine, chlorine or phenyl, or

A, B and the carbon atom to which they are bonded represent C_5-C_6-cycloalkyl which is substituted by an alkylenediyl group which optionally contains one oxygen or sulphur atom or by an alkylenedioxy group, this group together with the carbon atom to which it is bonded forming a further five- to six-membered ring, or

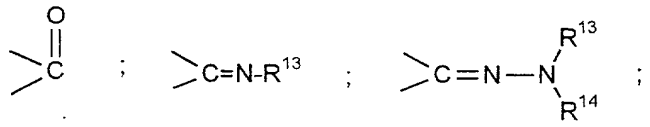
A, B and the carbon atom to which they are bonded represent C_3-C_6-cycloalkyl or C_5-C_6-cycloalkenyl in which two substituents together with the carbon atoms to which they are bonded represent C_3-C_4-alkanediyl, C_3-C_4-alkenediyl or butadienediyl, in each of which one methylene group is optionally replaced by oxygen or sulphur,

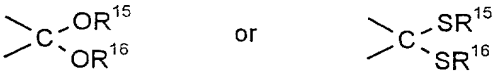
D represents hydrogen, or C_1-C_8-alkyl, C_3-C_4-alkenyl, C_3-C_4-alkinyl, C_1-C_6-alkoxy-C_2-C_4-alkyl, poly-C_1-C_4-alkoxy-C_2-C_4-alkyl, C_1-C_4-alkylthio-C_2-C_4-alkyl or C_3-C_6-cycloalkyl, each of which is optionally substituted by fluorine or chlorine and in which one or two methylene groups which are not directly adjacent to each other are optionally replaced by oxygen and/or sulphur, or phenyl, furanyl, pyridyl, thienyl or benzyl, each of which is optionally substituted by fluorine, chlorine, bromine, methyl, ethyl, n-propyl, iso-propyl, methoxy, ethoxy, trifluoromethyl, trifluoromethoxy, cyano or nitro,

or

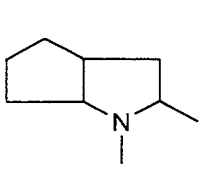
A and D together represent in each case optionally substituted C_3-C_4-alkanediyl or C_3-C_4-alkenediyl, in which one carbon atom is optionally replaced by oxygen or sulphur and each of which is optionally substituted by fluorine, chlorine, hydroxyl, mercapto, or by C_1-C_6-alkyl, C_1-C_4-alkoxy, C_1-C_4-alkylthio, C_3-C_6-cycloalkyl, phenyl or benzyloxy, each of which is optionally substituted by fluorine or chlorine, or

each of which optionally contains one of the following groups

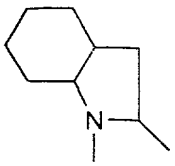




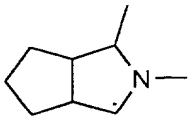
or A and D, in the case of the compounds of the formula (I-1), together with the atoms to which they are bonded, represent one of the following groups:



AD-1



AD-2



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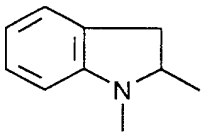
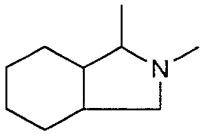
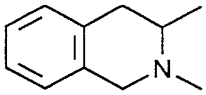


AD-6



AD-8



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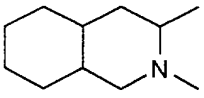
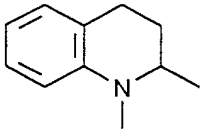
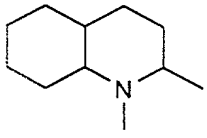


AD-12



AD-14



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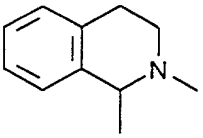
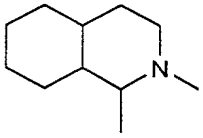
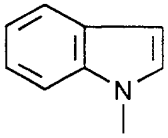


AD-17

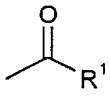
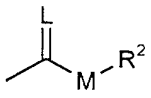
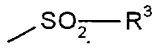
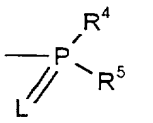


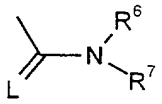
AD-18



AD-27 ,

G, in the event that Het represents one of the radicals (1), (2), (3), (5) or (6), represents hydrogen (a), or, in the event that Het represents one of the groups


(b),

(c),

(d),

(e),

E (f) or

(g),

in which

E represents a metal ion equivalent or an ammonium ion,

L represents oxygen or sulphur and

M represents oxygen or sulphur,

R^1 represents C_1-C_{14}-alkyl, C_2-C_{14}-alkenyl, C_1-C_4-alkoxy-C_1-C_6-alkyl, C_1-C_4-alkylthio-C_1-C_6-alkyl or poly-C_1-C_4-alkoxy-C_1-C_4-alkyl, each of which is optionally substituted by fluorine or chlorine, or C_3-C_6-cycloalkyl which is optionally substituted by fluorine, chlorine, methyl, ethyl, propyl, i-propyl, butyl, i-butyl, tert-butyl, methoxy, ethoxy, propoxy or iso-propoxy and in which up to two ring members are optionally replaced by oxygen and/or sulphur,

or phenyl which is optionally substituted by fluorine, chlorine, bromine, cyano, nitro, methyl, ethyl, propyl, i-propyl, methoxy, ethoxy, trifluoromethyl, trifluoromethoxy, methylthio, ethylthio, methylsulphonyl or ethylsulphonyl,

or benzyl which is optionally substituted by fluorine, chlorine, bromine, methyl, ethyl, propyl, i-propyl, methoxy, ethoxy, trifluoromethyl or trifluoromethoxy,

or furanyl, thienyl, pyridyl, pyrimidyl, thiazolyl or pyrazolyl, each of which is optionally substituted by fluorine, chlorine, bromine, methyl or ethyl,

or phenoxy-C_1-C_4-alkyl which is optionally substituted by fluorine, chlorine, methyl or ethyl, or

pyridyl-oxy-C_1-C_4-alkyl, pyrimidyloxy-C_1-C_4-alkyl or thiazolyloxy-C_1-C_4-alkyl, each of which is optionally substituted by fluorine, chlorine, amino, methyl or ethyl,

R^2 represents C_1-C_{14}-alkyl, C_2-C_{14}-alkenyl, C_1-C_4-alkoxy-C_2-C_6-alkyl, poly-C_1-C_4-alkoxy-C_2-C_6-alkyl, each of which is optionally substituted by fluorine or chlorine,

or C_3-C_6-cycloalkyl which is optionally substituted by fluorine, chlorine, methyl, ethyl, propyl, iso-propyl or methoxy,

or phenyl or benzyl, each of which is optionally substituted by fluorine, chlorine, cyano, nitro, methyl, ethyl, propyl, i-propyl, methoxy, ethoxy, trifluoromethyl or trifluoromethoxy,

R^3 represents methyl, ethyl, propyl or isopropyl, each of which is optionally substituted by fluorine or chlorine, or phenyl or benzyl, each of which is optionally substituted by fluorine, chlorine, bromine, methyl, ethyl, propyl, iso-propyl, tert-butyl, methoxy, ethoxy, isopropoxy, tert-butoxy, trifluoromethyl, trifluoromethoxy, cyano or nitro,

R^4 and R^5 independently of one another represent C_1-C_4-alkyl, C_1-C_4-alkoxy, C_1-C_4-alkylamino, di-(C_1-C_4-alkyl)amino or C_1-C_4-alkylthio, each of which is optionally substituted by fluorine or chlorine, or phenyl, phenoxy or phenylthio, each of which is optionally substituted by fluorine, chlorine, bromine, nitro, cyano, C_1-C_2-alkoxy, C_1-C_2-fluoroalkoxy, C_1-C_2-alkylthio, C_1-C_2-fluoroalkylthio or C_1-C_3-alkyl,

R^6 and R^7 independently of one another represent hydrogen, or C_1-C_4-alkyl, C_3-C_6-cycloalkyl, C_1-C_4-alkoxy, C_3-C_4-alkenyl or C_1-C_4-alkoxy-C_1-C_4-alkyl, each of which is optionally substituted by fluorine or chlorine, or phenyl which is optionally substituted by fluorine, chlorine, bromine, C_1-C_4-halogenoalkyl, C_1-C_4-alkyl or C_1-C_4-alkoxy, or benzyl which is optionally substituted by fluorine, chlorine, bromine, C_1-C_4-alkyl, C_1-C_4-halogenoalkyl or C_1-C_4-alkoxy, or together represent a C_5-C_6-alkylene radical in which one carbon atom is optionally replaced by oxygen or sulphur,

R^{13} represents hydrogen, or C_1-C_4-alkyl or C_1-C_4-alkoxy, each of which is optionally substituted by fluorine or chlorine, or C_3-C_6-cycloalkyl, or phenyl, phenyl-C_1-C_2-alkyl or benzyloxy, each of which is optionally substituted by fluorine, chlorine, bromine, methyl, ethyl, iso-propyl, tert-butyl, methoxy, ethoxy, iso-propoxy, tert-butoxy, trifluoromethyl, trifluoromethoxy, nitro or cyano,

R^{14} represents hydrogen or C_1-C_4-alkyl, or

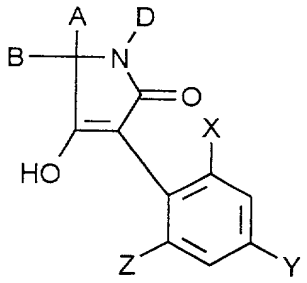
R^{13} and R^{14} together represent C_4-C_6-alkanediyl,

R^{15} and R^{16} are identical or different and represent methyl or ethyl, or

R^{15} and R^{16} together represent a C_2-C_3-alkanediyl radical which is optionally substituted by methyl, ethyl, n-propyl, iso-propyl, n-butyl, iso-butyl, sec-butyl, tert-butyl, or by phenyl which is optionally substituted by fluorine, chlorine, methoxy, trifluoromethyl, trifluoromethoxy, nitro or cyano.

5. Process for the preparation of compounds of the formula (I) according to Claim 1, characterized in that, to obtain

(A) compounds of the formula (I-1-a)

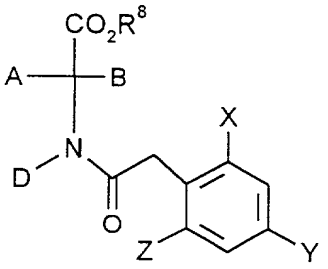


(I-1-a)

in which

A, B, D, X, Y and Z have the abovementioned meanings,

N-acylamino acid esters of the formula (II)



(II)

in which

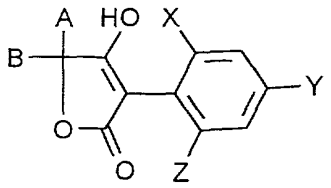
A, B, D, X, Y and Z have the abovementioned meanings

and

R^8 represents alkyl

are subjected to an intramolecular condensation reaction in the presence of a diluent and in the presence of a base,

(B) compounds of the formula (I-2-a)

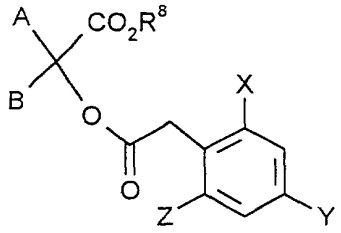


(I-2-a)

in which

A, B, X, Y and Z have the abovementioned meanings,

carboxylic esters of the formula (III)



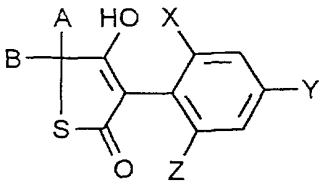
(III)

in which

A, B, X, Y, Z and R^8 have the abovementioned meanings

are subjected to an intramolecular condensation reaction in the presence of a diluent and in the presence of a base,

(C) compounds of the formula (I-3-a)

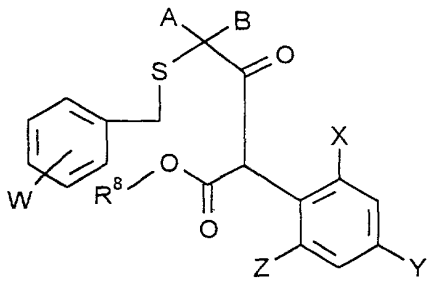


(I-3-a)

in which

A, B, X, Y and Z have the abovementioned meanings,

β-ketocarboxylic acid esters of the formula (IV)



(IV)

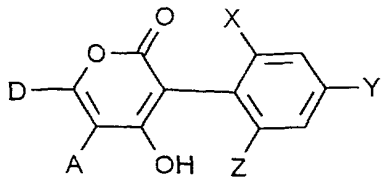
in which

A, B, X, Y, Z and R^8 have the abovementioned meanings and

W represents hydrogen, halogen, alkyl or alkoxy,

are subjected to an intramolecular cyclization reaction in the presence of a diluent and in the presence of an acid,

(E) compounds of the formula (I-5-a)

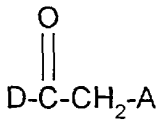


(I-5-a)

in which

A, D, X, Y and Z have the abovementioned meanings,

carbonyl compounds of the formula (VIII)

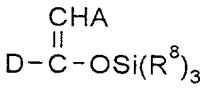


(VIII)

in which

A and D have the abovementioned meanings

or their silyl enol ethers of the formula (VIIIa)

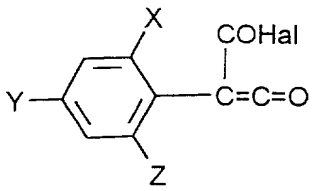


(VIIIa)

in which

A, D and R^8 have the abovementioned meanings

are reacted with ketene acid halides of the formula (V)



(V)

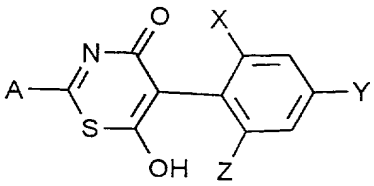
in which

X, Y and Z have the abovementioned meanings and

Hal represents halogen,

if appropriate in the presence of a diluent and if appropriate in the presence of an acid acceptor,

(F) compounds of the formula (I-6-a)

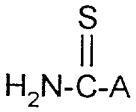


(I-6-a)

in which

A, X, Y and Z have the abovementioned meanings,

thioamides of the formula (IX)

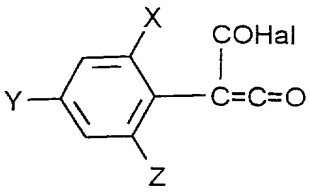


(IX)

in which

A has the abovementioned meaning

are reacted with ketene acid halides of the formula (V)



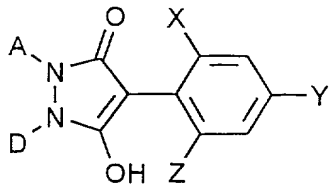
(V)

in which

Hal, X, Y and Z have the abovementioned meanings,

if appropriate in the presence of a diluent and if appropriate in the presence of an acid acceptor,

and, if appropriate, the resulting compounds of the formulae (I-1-a), (I-2-a), (I-3-a), (I-5-a), (I-6-a) or compounds of the formula (I-4-a)

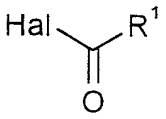


(I-4-a)

in which

A, D, X, Y and Z have the abovementioned meanings in each case

(Gα) are reacted with acid chlorides of the formula (X)



(X)

in which

R^1 has the abovementioned meaning and

Hal represents halogen

or

β) are reacted with carboxylic anhydrides of the formula (XI)

$$R^1\text{-CO-O-CO-}R^1 \qquad \text{(XI)}$$

in which

R^1 has the abovementioned meaning,

if appropriate in the presence of a diluent and if appropriate in the presence of an acid-binding agent, or

(H) are reacted with chloroformic esters or chloroformic thiolesters of the formula (XII)

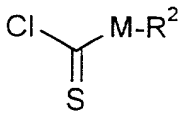
$$R^2\text{-M-CO-Cl} \qquad \text{(XII)}$$

in which

R^2 and M have the abovementioned meanings,

if appropriate in the presence of a diluent and if appropriate in the presence of an acid-binding agent, or

(Iα) are reacted with chloromonothioformic esters or chlorodithioformic esters of the formula (XIII)



(XIII)

in which

M and R^2 have the abovementioned meanings,

if appropriate in the presence of a diluent and if appropriate in the presence of an acid-binding agent,

or

β) are reacted with carbon disulphide and subsequently with alkyl halides of the formula (XIV)

$$R^2\text{-Hal} \qquad \text{(XIV)}$$

in which

R^2 has the abovementioned meaning and

Hal represents chlorine, bromine or iodine,

if appropriate in the presence of a diluent and in the presence of a base, or

(J) are reacted with sulphonyl chlorides of the formula (XV)

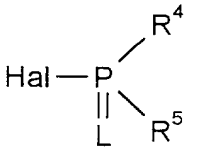
$$R^3\text{-}SO_2\text{-Cl} \qquad \text{(XV)}$$

in which

R^3 has the abovementioned meaning,

if appropriate in the presence of a diluent and if appropriate in the presence of an acid-binding agent, or

(K) are reacted with phosphorus compounds of the formula (XVI)



(XVI)

in which

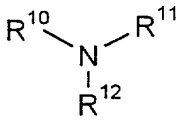
L, R^4 and R^5 have the abovementioned meanings and

Hal represents halogen,

if appropriate in the presence of a diluent and if appropriate in the presence of an acid-binding agent, or

(L) are reacted with metal compounds or amines of the formulae (XVII) or (XVIII)

$Me(OR^{10})_t$ (XVII)



(XVIII)

in which

Me represents a mono- or divalent metal,

t represents the number 1 or 2 and

R^{10}, R^{11} and R^{12} independently of one another represent hydrogen or alkyl,

if appropriate in the presence of a diluent, or

(Mα) are reacted with isocyanates or isothiocyanates of the formula (XIX)

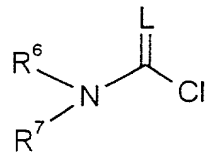
$$R^6\text{-}N{=}C{=}L \qquad \text{(XIX)}$$

in which

R^6 and L have the abovementioned meanings,

if appropriate in the presence of a diluent and if appropriate in the presence of a catalyst, or

β) are reacted with carbamoyl chlorides or thiocarbamoyl chlorides of the formula (XX)



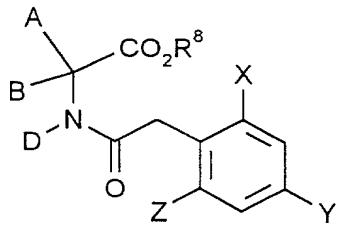
(XX)

in which

L, R^6 and R^7 have the abovementioned meanings,

if appropriate in the presence of a diluent and if appropriate in the presence of an acid-binding agent.

6. Compounds of the formula (II)



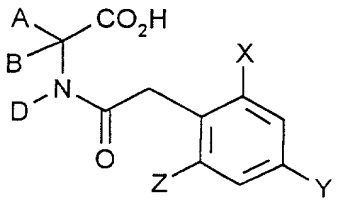
(II)

in which

A, B, D, X, Y and Z have the meanings given in Claim 1 and

R^8 represents alkyl.

7. Compounds of the formula (XXIII)

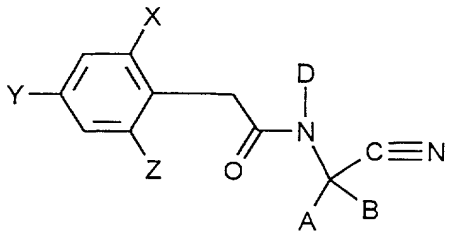


(XXIII)

in which

A, B, D, X, Y and Z have the meanings given in Claim 1.

8. Compounds of the formula (XXVI)

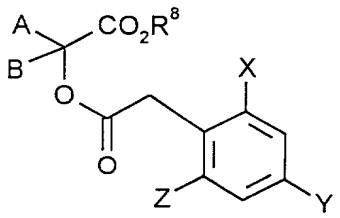


(XXVI)

in which

A, B, D, X, Y and Z have the meanings given in Claim 1.

9. Compounds of the formula (III)



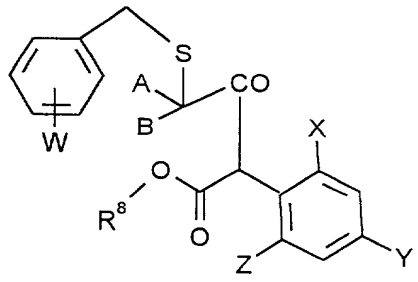
(III)

in which

A, B, X, Y and Z have the meanings given in Claim 1 and

R^8 represents alkyl.

10. Compounds of the formula (IV)



(IV)

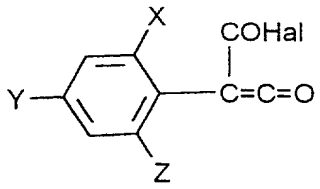
in which

A, B, X, Y and Z have the abovementioned meanings,

R^8 represents alkyl and

W represents hydrogen, halogen, alkyl or alkoxy.

11. Compounds of the formula (V)



(V)

in which

X, Y and Z have the meanings given in Claim 1 and

Hal represents chlorine or bromine.

12. Pesticides and herbicides, characterized in that they comprise at least one compound of the formula (I) according to Claim 1.

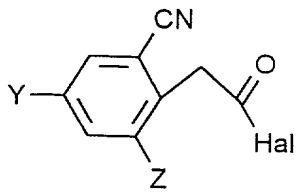
13. Use of compounds of the formula (I) according to Claim 1 for combating pests and weeds.

14. Method of combating pests and weeds, characterized in that compounds of the formula (I) according to Claim 1 are allowed to act on pests and/or their environment or on weeds and/or their environment.

15. Process for the preparation of pesticides and herbicides, characterized in that compounds of the formula (I) according to Claim 1 are mixed with extenders and/or surface-active agents.

16. Use of compounds of the formula (I) according to Claim 1 for the preparation of pesticides and herbicides.

17. Compounds of the formula (XXII-a)



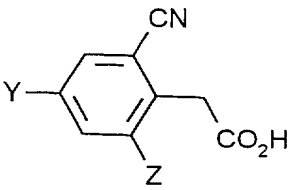
(XXII-a)

in which

Hal represents chlorine or bromine and

Y and Z have the meanings given in Claim 1, but do not simultaneously represent hydrogen.

18. Compounds of the formula (XXVIII-a)

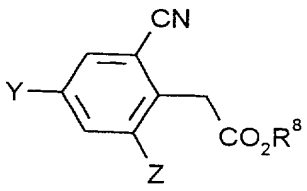


(XXVIII-a)

in which

Y and Z have the meanings given in Claim 1.

19. Compounds of the formula (XXX-a)



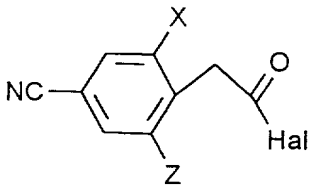
(XXX-a)

in which

Y and Z have the meanings given in Claim 1 and

R^8 represents alkyl.

20. Compounds of the formula (XXII-b)



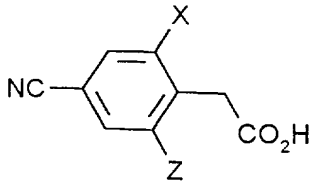
(XXII-b)

in which

Hal represents chlorine or bromine and

X and Z have the meanings mentioned in Claim 1.

21. Compounds of the formula (XXVIII-b)

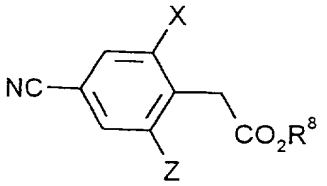


(XXVIII-b)

in which

X and Z have the meanings given in Claim 1.

22. Compounds of the formula (XXX-b)



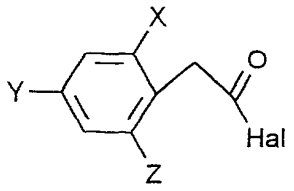
(XXX-b)

in which

X and Z have the meanings given in Claim 1 and

R^8 represents alkyl.

23. Compounds of the formula (XXII-c)



(XXII-c)

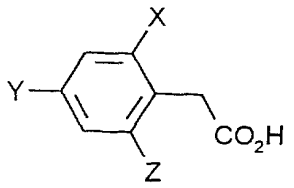
in which

Hal represents chlorine or bromine,

X represents $OCHF_2$ or OCH_2CF_3 and

Y and Z have the meanings given in Claim 1, but do not simultaneously represent hydrogen.

24. Compounds of the formula (XXVIII-c)



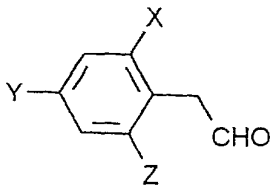
(XXVIII-c)

in which

X represents $OCHF_2$ or OCH_2CF_3 and

Y and Z have the meanings given in Claim 1.

25. Compounds of the formula (XXXIV-c)



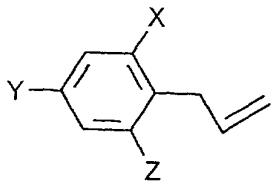
(XXXIV-c)

in which

X represents $OCHF_2$ or OCH_2CF_3 and

Y and Z have the meanings given in Claim 1.

26. Compounds of the formula (XXXV-c)



(XXXV-c)

in which

X represents $OCHF_2$ or OCH_2CF_3 and

Y and Z have the meanings given in Claim 1.